



United States Department of the Interior

FISH AND WILDLIFE SERVICE

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Memorandum

To: Brian Sanchez, U.S. EPA, Region 8, Denver, CO

From: David Rouse, USFWS, Helena, MT

Date: January 12, 2018

Subject: Comments on Columbia Falls Aluminum Company Draft Baseline Ecological Risk Assessment Work Plan

Following review of the Columbia Falls Aluminum Company (CFAC) Draft Baseline Ecological Risk Assessment Work Plan, the USFWS Montana Ecological Services Field Office offers the following comments:

Section 3.3.1.2. In addition to amphibians, transitional exposure areas may also be important for some small home range avian species and exposure to these species to COPECs should be considered.

Section 3.3.5. It is recognized that surrogate species are simply used as representatives of certain guilds, but the use of species likely to occur at the site may be improve the risk assessment. For instance, the northern short-tailed shrew and woodcock are unlikely to occur at this location and alternatives to these species could include the montane shrew and American robin, receptively. It could be beneficial to include white-tailed deer as an additional mammalian herbivore since historic white-tailed deer fluoride data exists for this site (Kay et al. 1975).

Section 3.3.5. Bald and golden eagles could be added to this section due to their likelihood of occurring near or on the site, in the case of the bald eagle, and their protected status under the Bald and Golden Eagle Protection Act.

Section 3.3.6.2. Historic fluoride data exists for deer (Kay et al. 1975) and lodgepole pines (Carlson et al. 1974) for the CFAC site and may be useful to include in this section or for future analyses.

Section 3.3.6.3. In addition to the species discussed in this discussion, it may be worth nothing that effects to fish and birds can also occur due to PAH exposure, including exposures to low concentrations

Section 3.4.1. It would be helpful to see how some of the lower end ESVs relate to species found at the site, considering species like bull trout with vulnerable populations are found on or near the CFAC site. Dismissing some of the COPECs with MDLs above ESVs relevant to sensitive species, would fail to evaluate risk to those species.

Section 3.4.3.1. It is not clear from the text or Appendix A of what data was used to develop the Eco-SSLs.

Section 5.2. It is recommended that exposure point concentrations (EPCs) for the aquatic exposure unit be calculated by individual features (e.g. Flathead River, North Percolation Pond, South Percolation Pond) or at a minimum, by waterbody type (i.e. lotic vs lentic).

Figure 4. Should direct ingestion of surface water be a complete pathway for water-column invertebrates, benthic invertebrates, amphibians, and fish? Section 3.3.4.2 indicates that direct ingestion of dietary items and surface water and indirect ingestion of sediment and soil is the primary exposure pathway for most aquatic and terrestrial receptors.

Figure 5. Should direct ingestion of surface water be a complete pathway for water-column invertebrates, benthic invertebrates, and amphibians? Section 3.3.4.2 indicates that direct ingestion of dietary items and surface water and indirect ingestion of sediment and soil is the primary exposure pathway for most aquatic and terrestrial receptors.

Thank you for the opportunity to comment on the CFAC Draft Baseline Ecological Risk Assessment Work Plan. If you have further questions, please contact David Rouse at david_rouse@fws.gov or 406-449-5225 ext. 211.

References

Kay CE, Tourangeau PC, and Gordon CC. 1975. Industrial fluorosis in wild mule and whitetail deer from western Montana. *Fluoride* 8:182–91

Carlson CE, Bousfield WE, and McGreor MD. 1977. The relationship of an insect infestation on lodgepole pine to fluorine emitted from a nearby aluminum plant in Montana. *Journal of the International Society of Fluoride Research* 10: 14-21